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| 09/546,052  | 04/10/2000  | Joseph J. Weinstein  | 99-432                     | 2602               |
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| VERIZON CORPORATE SERVICES GROUP INC.<br>C/O CHRISTIAN R. ANDERSEN<br>600 HIDDEN RIDGE DRIVE<br>MAILCODE HQEO3H14<br>IRVING, TX 75038 |             |                      |                            |                    |
|   |             |                      | EXAMINER<br>NGUYEN, TOAN D |                    |
|   |             |                      | ART UNIT<br>2665           | PAPER NUMBER<br>13 |
| DATE MAILED: 04/20/2004   |             |                      |                            |                    |

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/546,052

Applicant(s)

WEINSTEIN ET AL.

Examiner

Toan D Nguyen

Art Unit

2665

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 05 February 2004.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 April 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

**DETAILED ACTION**

***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1, 3-4, 6, 9, 11 and 14-17 are rejected under 35 U.S.C. 102(e) as being by Zhang (U.S. Patent 6,275,492 B1).

For claim 1, Zhang discloses method and apparatus for routing data using router identification information comprising:

a memory storing a routing table (figure 2, col. 5 lines 30-39);

a receiver for receiving link state information from the network (figure 3, col. 5 lines 55-61); and

a processor (figure 2, col. 5 lines 28-29) for (i) determining, responsive to the received link state information forwarded to the router, a status of connections in the mobile network (figures 1 and 3, col. 3 lines 24-41 and col. 5 lines 55-61 as a status connections means) (ii) generating network topology information based on the determined connection status information (figure 3, col. 3 lines 42-44 and col. 5 lines 55-59 as generating network topology information means) (ii) placing the generated network topology information in said routing table (see Table 1, col. 3 line 44 to col. 4 line 16 and col. 6 lines 55-59), and (iv) transmitting the network

Art Unit: 2665

topology information in the routing table to at least one other router in the mobile network (col. 4 lines 23-32 and col. 6 lines 9-10).

For claim 3, Zhang discloses further comprising a transmitter for transmitting a message including the network topology information retrieved from said routing table (figure 3, col. 5 line 55 to col. 6 line 24).

For claim 4, Zhang discloses method and apparatus for routing data using router identification information comprising the steps of:

receiving link state information of the network that is forwarded to each router in the mobile network (figure 3, col. 5 lines 55-60);

determining connections of devices in the mobile network in the receiving router responsive to the received link state information forwarded to the router (figure 3, col. 3 lines 24-41 and col. 5 line 55 to col. 6 line 24);

collecting the determined device connection information to generate network topology information in the receiving router (figure 3, col. 3 lines 42-44 and col. 5 line 55 to col. 6 line 24);

placing the generated network topology information in a routing table of the receiving router (see Table 1, col. 3 line 44 to col. 4 line 16 and col. 5 lines 55-59); and

retrieving the network topology information from the routing table (col. 5 line 55 to col. 6 line 24).

For claim 6, Zhang discloses further the step of transmitting a message by the receiving router including the network topology information retrieved from the routing table (figure 3, col. 5 line 55 to col. 6 line 24).

Art Unit: 2665

For claim 9, Zhang discloses method and apparatus for routing data using router identification information comprising:

a plurality of routers in the mobile network (figure 1, col. 3 lines 15- 22) each including:  
a receiver for receiving link state information from the mobile network in a message issued to the plurality of routers (figure 3, col. 5 lines 55-60);

a processor in each router (figure 2, col. 5 lines 28-29), responsive to the received link state information for (i) determining router connection information in the mobile network (figures 1 and 3, col. 3 lines 24-41 and col. 5 lines 55-61), (ii) collecting the determined router connection information (figure 3, col. 3 lines 42-44 and col. 5 lines 55-61) (iii) generating network topology information from the collected router connection information (see Table 1, col. 3 line 44 to col. 4 line 16 and col. 5 lines 55-59) (iv) storing the generated network topology information in a routing table (figure 3, Table 1, col. 3 line 44 to col. 4 line 16 and col. 5 lines 56-57), and (v) retrieving the network topology information in the routing table and forming it into a link state message to be broadcast to at least one other router in the mobile network (col. 4 lines 23-32 and col. 5 line 55 to col. 6 line 24).

For claim 11, Zhang discloses further a transmitter in each router in the mobile network for transmitting the link state message including the network topology information retrieved from the routing table (figure 3, col. 5 line 55 to col. 6 line 24).

For claim 14, Zhang discloses wherein the transmitter transmits the link state information message to the plurality of routers in the mobile network after its corresponding receiver receives the link state information from the mobile network (figure 2, col. 5 lines 32-39).

Art Unit: 2665

For claim 15, this claim is directed to the same subject matter as in claim 4. Therefore, it is subject to the same rejection.

For claim 16, this claim is directed to the same subject matter as in claim 1. Therefore, it is subject to the same rejection.

For claim 17, this claim is directed to the same subject matter as in claim 9. Therefore, it is subject to the same rejection.

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. Claims 2, 5, 7-8, 10 and 12-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zhang (U.S. Patent 6,275,492 B1) in view of Mann et al. (U.S. Patent 6,310,883 B1).

For claims 2, 5, 7-8, 10 and 12-13, Zhang do not disclose wherein the processor transmits the network topology information to the at least one other router in the mobile network at a

Art Unit: 2665

predetermined cycle. In an analogous art, Mann et al. disclose wherein the processor transmits the network topology information to the at least one other router in the mobile network at a predetermined cycle (col. 13 lines 52-54). Mann et al. disclose wherein the network topology information is generated periodically (col. 13 lines 19-22 as set forth in claims 5, 10 and 13); wherein the link state information is transmitted to the plurality of routers in the mobile network at predetermined times (col. 13 lines 19-22 as set forth in claims 7-8 and 12).

One skilled in the art would have recognized a predetermined cycle to use the teachings of Mann et al. in the system of Zhang. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention, to use the predetermined cycle as taught by Mann et al. in Zhang's system with the motivation being to generate a new current population of strings represented by current population data based upon selection of fittest strings from each of the current, intermediate and manipulated populations (col. 14 lines 10-13).

6. Claims 18-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zhang (U.S. Patent 6,275,492 B1) in view of Kelley et al. (U.S. Patent 6,542,469 B1).

For claim 18-20, Zhang does not disclose upon determining, responsive to the received link state information, that no other router in the mobile network is currently accessible, performs control processing to determine how often and when to attempt to gather and information relating to the network topology. In an analogous art, Kelley et al. disclose upon determining, responsive to the received link state information, that no other router in the mobile network is currently accessible, performs control processing to determine how often and when to attempt to gather and information relating to the network topology (col. 5 lines 18-26).

Art Unit: 2665

One skilled in the art would have recognized upon determining, responsive to the received link state information, that no other router in the mobile network is currently accessible, performs control processing to determine how often and when to attempt to gather and information relating to the network topology to use the teachings of Kelley et al. in the system of Zhang. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention, to use the upon determining, responsive to the received link state information, that no other router is currently accessible, performs control processing to determine how often and when to attempt to gather and information relating to the network topology as taught by Kelley et al. in Zhang's system with the motivation being to provide maximally disjoint paths, the probability of finding an alternate path that does not block the call is increased (col. 5 lines 24-26).

#### ***Response to Arguments***

7. Applicant's arguments with respect to claims 1-20 have been considered but they are not persuasive.

The applicant argues with respect 1, 4, 9, 15, 16 and 17 that Zhang's patent does not relate to a mobile network. The examiner disagrees. Applicant's attention is directed to Zhang patent at col. 7 lines 1-3 where Zhang clearly teaches "the present invention may be applicable to wireless implementations".

Furthermore, the applicant argues that Zhang does not teach determining a status of connection in the mobile network, generating topology information based on the status, and after generating the topology information, placing it in a routing table and transmitting the topology information to at least one other router in the mobile network. Applicant's attention is directed to



Art Unit: 2665

Zhang patent at figure 1, col. 3 lines 24-41 where Zhang clearly teaches “For example, route R1 advertises LSAs into area 0.0.0.1 to indicate that it has connection to node N1, N2, N3, and N13 in the area. Router R2 advertises LSAs into area 0.0.0.1 to indicate that it has connections to nodes N4, N5, N6, N13 and N15 in the area” as determining a status of connection in the mobile network. Zhang teaches further at col. 3 lines 42-44, “based on the information received in LSAs, each router calculates routes to various destinations (e.g., other network nodes or routers) in the network as generating topology information based on the status. At col. 3 lines 44-47 and Table 1, Zhang teaches “Each router generates a routing table containing these destinations and the method for routing data to the destination. Table 1 below illustrates an example routing table for router R1 in figure 1” as after generating the topology information, placing it in a routing table. Zhang teaches at col. 4 lines 25-32, “In the example of Table 1, when router R1 receives a packet addressed to node N17, router R1 uses its routing table to determine that the next hop is router R2. Router R1 then sends the packet to router R2. Router R2 then perform a similar lookup using its own routing-table and determines that router R6 is the next hop router. Router R6 then sends the packet directly to its destination, node N17.” as transmitting the topology information to at least one other router in the mobile network.

### ***Conclusion***

8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after

Art Unit: 2665

the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

***Contact Information***

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Toan D Nguyen whose telephone number is 703-305-0140. The examiner can normally be reached on Monday- Friday (7:00AM-4:30PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Huy Vu can be reached on 703-308-6602. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9314 for regular communications and 703-872-9314 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-9600.

TN

T.N.



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